Incremental Implementation Strategy

7

185th Street Station Subarea Plan

The Pearl District's Transit-Oriented Development in Portland, Oregon.

This chapter of the 185th Street Subarea Plan focuses on planning and implementation actions that need to be completed over the next twenty years to serve growth in the subarea, including system planning updates, coordination and outreach, exploration of partnership opportunities, capital improvements, and other activities.

Planning Horizon: Year 2035

Build-out of the proposed zoning described in Chapter 5 for the subarea, will take many decades to be realized (80 to 125 years at 1.5 percent to 2.5 percent growth). Proposed actions in this chapter of the subarea plan anticipate the level of change that will occur over the next twenty years after adoption of the plan—by 2035. Understanding impacts and necessary mitigations in this 20 year timeframe will allow the City to prioritize capital projects in the near term; analyzing impacts of full build-out also provides an understanding of long-term needs. If development happens more quickly than the projected growth rate, the City knows what mitigations need to be implemented by developers. If at some point in the future proposed development would exceed the level analyzed in the EIS process, additional analysis of impacts and requisite improvements would need to be performed before projects could move forward.

Anticipated Growth and Change over the Next Twenty Years

Within the twenty-year planning horizon through 2035, there are three important timeframes and anticipated activities within each to consider.

- **2015 TO 2018**
  The first three years after plan adoption, system plans will need to be updated such as transportation, sewer, water, and surface water master plans, the park and recreation plan, etc. Capital improvement plans will need to be updated to reflect the new projects needed to support the subarea. This will also be an intensive time of coordination and outreach with agencies, service providers, property owners, etc. The City and other agencies will seek funding for capital projects and move forward with implementing them. The City also will be exploring possible partnerships in redevelopment activity.

The light rail station and system will be going through final design. The City will be working with Sound Transit to explore the potential for including some community uses and active street-level uses at the station and park-and-ride garage.

While some planning and design of redevelopment would be expected, only minimal construction would be anticipated during this stage. Some property owners may move forward with redevelopment or work with other property owners to aggregate parcels for redevelopment. There could be more of a focus in areas closest to the station or on larger parcels that can accommodate redevelopment without aggregation. Sound Transit will begin construction of tracks and station.

2019 TO 2023

During this five-year timeframe, some continued systems planning and capital improvement plan updates would occur according to their normal cycles. The City and other agencies will continue to fund and implement capital projects to support growth.

The City will continue to coordinate with and provide outreach to agencies, service providers, and property owners, and also will regulate planning, design, and construction of redevelopment projects. Some property owners may move forward with redevelopment or work with other property owners to aggregate parcels to sell for redevelopment.

The City also will continue to explore potential partnerships in redevelopment and a partnership project could move forward. Examples of partnership projects might include development of regional surface water facilities to serve the subarea, coordinating on redevelopment of uses at the Shoreline Center if the School District moves forward with any changes there, or supporting an affordable housing project.

Also during this timeframe, some redevelopment may move forward into construction, with some likely timed for completion toward the opening of light rail. There may be more of a continued focus on properties immediately surrounding the station, as well as on some of the larger parcels that can accommodate redevelopment without aggregation.

Construction of the light rail station and system would progress toward completion and operation by 2023. Existing and new residents and employees in the subarea would be able to access the station via improved streets, intersections, and sidewalks. It is hoped that people from the subarea will primarily walk and bicycle to the station given improvements planned by Sound Transit and the City. People from the outer reaches of the subarea and from throughout the surrounding region (including the rest of Shoreline) will access the station via improved local transit connections and park-and-ride. Bike share and car share programs may be implemented.

Rotary Park

Shoreline Park Playground

Table 7-1: Expected Population, Households, and Employees in the Subarea by 2035

	1.5 TO 2.5 PERCENT AVERAGE ANNUAL GROWTH
2035 New Population	+2,916 to 5,399 More People*
2035 New Households	+1,140 to 2,190 More Households*
2035 New Employees	+502 to 928 More Employees* in Approximately 1,850,000 GSF
2035 Total Population	10,860 to 13,343 Total People
2035 Total Households	4,450 to 5,500 Total Households
2035 Total Employees	1,950 to 2,370 Total Employees in Approximately 4,740,000 GSF

** Above current levels of population, households, and employees in the subarea. Numbers include redevelopment in the area of adopted zoning in the subarea, as well as in subarea portions of the Town Center and North City districts.*

▸ 2024 TO 2035

The ten-year timeframe after light rail begins operating likely will result in more change and redevelopment activity in the subarea than the previous ten years before 2024. During this ten-year timeframe, systems planning and capital improvement plan updates would occur according to their normal cycles. The City and other agencies will continue to fund and implement capital projects to support growth.

The City will continue to coordinate with and provide outreach to agencies, service providers, and property owners, and also will regulate planning, design, and construction of redevelopment projects. The City may be involved in specific redevelopment project implementation as described for the 2019 to 2023 timeframe.

Redevelopment throughout the subarea (where the new zoning has been adopted) will continue. There may continue to be more of a focus on larger parcels and areas surrounding the station, but redevelopment may also occur elsewhere throughout the subarea. In accordance with the anticipated pace of average annual growth of 1.5 percent to 2.5 percent, it is estimated that there could be up to 2,190 new households and up to 1,850,000 gross square feet (GSF) of ground-floor/street-level active uses such as retail, professional office, and neighborhood services developed in the subarea as part of new projects as shown in **Table 7-1**. The total estimated population, households, and employees in the subarea are also depicted in the table.

The light rail system will continue to operate, with continuous building ridership coming from existing and new residents and employees in the subarea. With ongoing improvements to streets, intersections, and sidewalks throughout the subarea, more and more people will be able to walk and bicycle to the station. Some from the outer reaches of the subarea and from throughout the surrounding region (including the rest of Shoreline) will access the station via improved local transit connections and park-and-ride. Bike share and car share programs may be in place by this time, contingent upon minimum densities needed to support these services.

Near Term Planning Actions

With adoption of this subarea plan, the City also will amend its Comprehensive Plan and Municipal Code to reflect the adopted change in land use and zoning. The City will continue to review and evaluate how development standards and regulations in the Code are being applied with redevelopment and may modify these as time goes by to correct deficiencies and enhance compatibility.

In addition to these activities, the City and agencies such as Shoreline Water District, Seattle Public Utilities, Ronald Wastewater and other service providers will be updating their systems plans to reflect the adopted zoning and anticipated growth in the subarea. The agencies and service providers will explore funding and implementation options and monitor the pace of redevelopment to ensure that systems and facilities are upgraded incrementally to support the new growth as it occurs.

Likewise, the City will update its Capital Improvement Plan to reflect prioritization of the improvements needed in the subarea and continually monitor redevelopment, completion of capital improvements, and ongoing improvement needs in the subarea. The City also will update systems plans, including the Parks, Recreation, and Open Space Plan; Surface Water Master Plan; and Transportation Master Plan. The City will work to fund and complete key planning and design projects such as a specific corridor plan with preliminary design for the NE 185th Street/10th Avenue/180th Street corridor. Estimated costs for planning and plan updates are listed at the end of this chapter.

Coordination and Outreach

The City will continue to coordinate and provide information and outreach to agencies, service providers, property owners, and the general community. City staff will provide ongoing updates on progress of plan implementation and redevelopment activity in the subarea. During the first three years after adoption, it will be particularly important to closely coordinate with these entities to monitor improvements being made and to estimate the potential pace of redevelopment activity. During the first year after adoption of this plan, the City will need to provide ongoing coordination and outreach and schedule specific meetings with entities such as:

- Sound Transit
- Washington State Department of Transportation
- Shoreline School District
- Seattle City Light
- Property Owners – including those who own larger parcels such as multiple religious organizations
- Shoreline Water District
- Seattle Public Utilities
- Ronald Wastewater District
- Energy and communications service providers
- Solid waste management contractor(s)
- Interdepartmental representatives at the City from Transportation, Surface Water, Utilities, Parks and Recreation, and other departments
- Human and social services providers

The City will continue to provide outreach to individual property owners through community engagement activities (website updates, periodic public meetings, news articles, etc.)

Potential Transit-Oriented Redevelopment

Exploring Potential Partnerships

The City will be moving forward with capital improvement planning and implementation, but also may find opportunities to support redevelopment and be engaged in projects as a key partner. Examples of partnership projects might include development of regional surface water facilities to serve the subarea (which can be combined with urban park solutions), coordinating on redevelopment of uses at the Shoreline Center if the School District moves forward with any changes there, supporting an affordable housing project, and working with Sound Transit to include some community uses and active uses as part of station and park-and-ride development.

Specific partnership projects are not defined in detail at this stage. Considering options and reaching conclusions about how the City can be involved to support and implement projects through various partnerships should be a focus over the next one to three years and beyond. This would include potential partnerships with public agencies, nongovernmental organizations, and private entities. "Partnership" could entail provision of in-kind services, waiving of fees or certain requirements to help facilitate implementation, property acquisition, funding/financial involvement, technical assistance, and/or providing a specialized level of support to key projects.

For example, the City owns property adjacent to the Shoreline Center (Shoreline Park and Shoreline Pool) and operates activities within the Center complex (Spartan Recreation Center). Policy direction in this plan encourages partnership with the School District to potentially combine these services.

Capital Improvement Project Recommendations Based on Expected Growth through 2035

While overall the subarea zoning would not build out for approximately 80 to 125 years, improvement needs for the next twenty years have been defined based on the 1.5 to 2.5 percent growth rate.

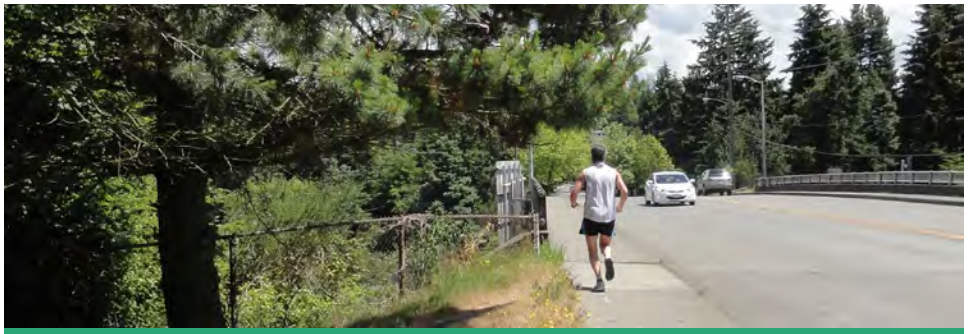
The assumed growth rates are based on historical trends in the region and may fluctuate around the average of 1.5 and 2.5 percent annually depending on actual market conditions. Additionally, while the analysis assumed an equal distribution of development throughout the subarea, particular parcels may redevelop at a higher or lower rate than the average. The length of time until full build-out of the subarea plan will

enable the City and other agencies and service providers to monitor growth and proactively plan for needed improvements. This should occur as development proceeds in order to provide a sustainable and efficient infrastructure system within the subarea, and so that public services like parks and schools can keep pace with growth.

In the meantime, the next twenty years will bring an important focus on funding and implementing projects to support anticipated growth. This plan forecasts capital improvements needed to accommodate existing uses and redevelopment over the next twenty years. This includes expansion of and improvements to the transportation system, utilities such as water, sewer, surface water, energy, communications, parks and recreation, and other public services. Anticipated capital improvement needs are described on the following pages for:

- Transportation System
- Utility Systems
- Parks, Recreation, Open Space and Other Areas of the Public Realm
- Schools and Other Public Services

Recommended capital improvements are based on planning level analysis. These will need to be further evaluated and confirmed through systems plan updates by agencies and service providers.



Runner along 185th Street

Transportation System Improvement Needs

Existing and planned transportation system conditions are described in Chapter 3 of this plan. In addition to projects that area already planned, new capital improvements will be needed over the next twenty years to serve anticipated growth and redevelopment in the subarea. Estimated increases in PM Peak period trips and trip rates per mode are shown in **Table 7-2** for the next twenty years through 2035 and for the full build-out of the subarea.

Table 7-2: Forecasted PM Peak Travel and Percentage of Trips by Mode

	EXTERNAL WALK/ BIKE TRIPS	EXTERNAL TRANSIT TRIPS	INTERNAL TRIPS	EXTERNAL AUTO TRIPS	TOTAL PM PEAK TRIPS GENERATED	EXTERNAL PM AUTO TRIPS GENERATED	DAILY TRANSPORTATION-RELATED GHG EMISSIONS
First Twenty Years (Up to 2035)	5%	8%	29%	57%	8,289	4,725	169
Subarea Overall with Full Build-Out of the Planned Action (By 2095 to 2140)	10%	11%	35%	45%	20,111	8,967	320

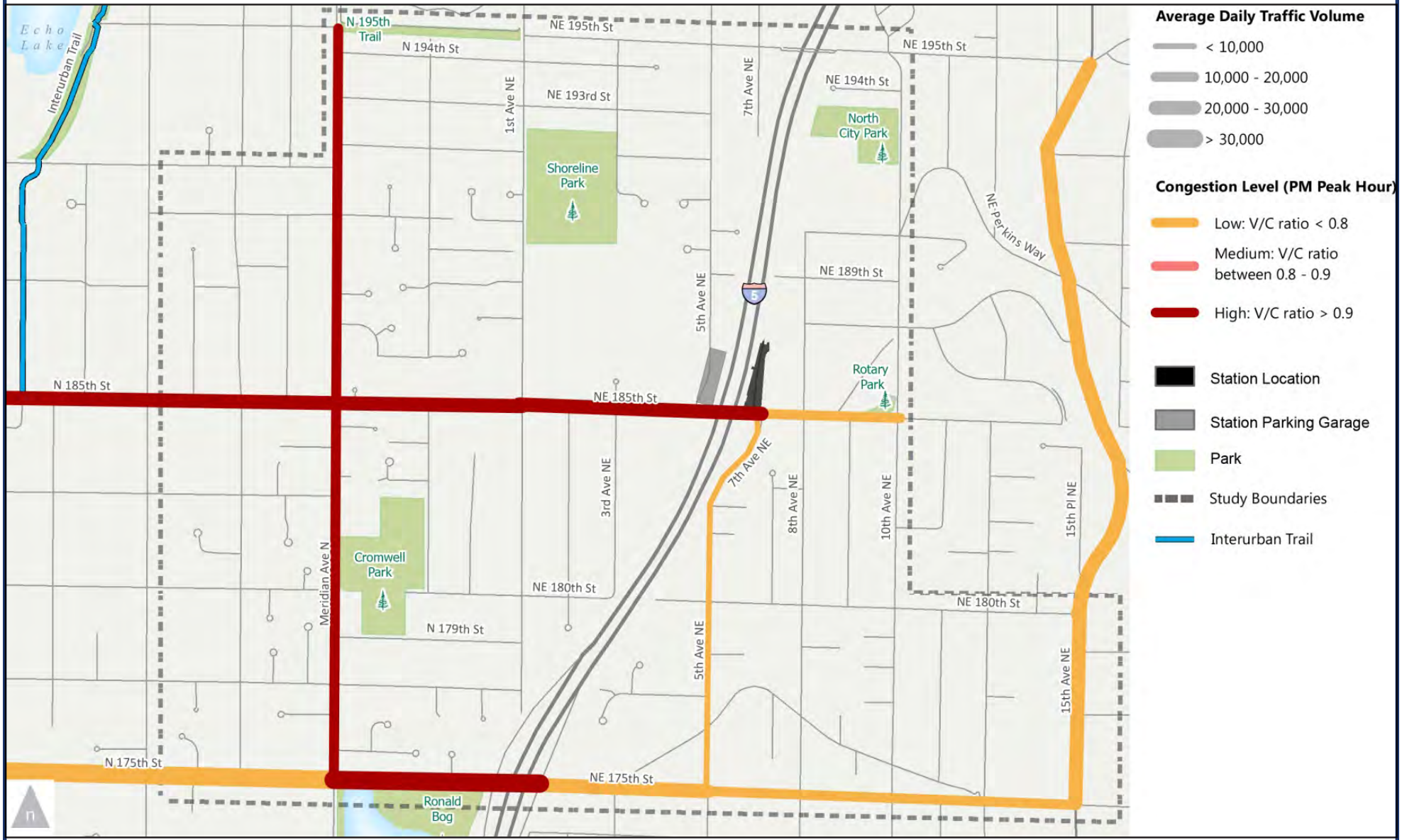


FIGURE 7-1: Average Daily Traffic and PM Peak Congestion for the First Twenty Years (up to 2035)

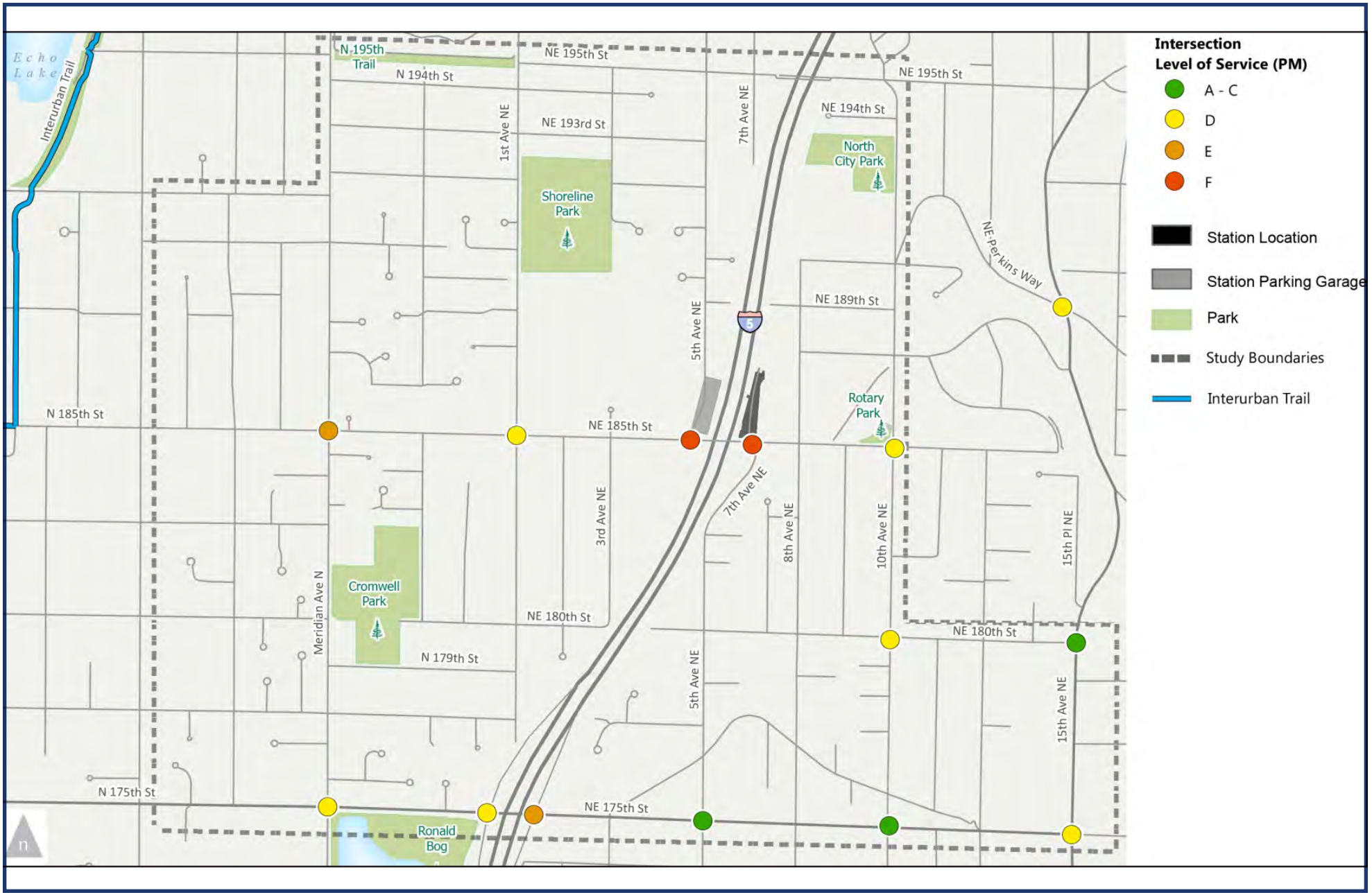


FIGURE 7-2: Intersection Level of Service for the First Twenty Years (up to 2035)

AVERAGE DAILY TRAFFIC AND INTERSECTION LEVEL OF SERVICE

As shown in **Figure 7-1** and **Figure 7-2** , additional trips resulting from redevelopment in the subarea would increase average vehicle delay at intersections and along roadways. However, many intersections would still operate at or better than LOS D during the PM peak period. Congestion along N-NE 185th Street would be influenced by actual development patterns and the access routes to the new development. Intersections directly adjacent to the station and the parking garage would most likely require signalization as a result of trips generated specifically for station access. However no added lane capacity would be required at those intersections. While impacts from light rail implementation are addressed in the Lynnwood Link Extension DEIS, the following section identifies specific steps the City may take to address additional potential impacts within the subarea.

Again it should be noted that while the analysis assumes an equal distribution of development throughout the subarea, particular parcels may redevelop at a higher or lower rate than the average. As such, actual distribution of development would impact where and when specific roadways and areas experience a change in travel patterns.

In addition to the roadway improvements called out in the Shoreline Transportation Master Plan (TMP)[1], the following measures are recommended for subarea over the next twenty years.

N-NE 185TH STREET

The main corridor within the subarea is also the primary connection to the station and will most likely experience the largest amount of trip growth. Current daily volumes of up to 9,700 along the corridor are far below capacity and do not necessitate any infrastructure improvements beyond what has already been identified in the TMP and the Lynnwood Link Extension Preferred Alternative.

Based on forecast volumes, N-NE 185th Street may carry up to 20,000 vehicles per day; approaching the theoretical capacity of the corridor. Beyond what has already been identified in the TMP, the City should take the following actions as appropriate during the twenty-year horizon to properly manage changes in travel patterns along this corridor.

- Travel demand management strategies to reduce overall vehicle trips along the corridor. This includes continued expansion of the bicycle and pedestrian network along with transit service priority measures
- Continue to monitor traffic volumes on a bi-annual basis to identify changes in congestion patterns
- Employ access management strategies for new development to reduce the number of curb cuts and access points along N-NE 185th Street
- Expand signal coordination and other Intelligent Transportation Systems (ITS) strategies.
- Consistent with the TMP, reconfigure the intersection of N 185th Street and Meridian Avenue N
- Provide protected/permitted phasing for northbound and southbound left-turn movements at N 185th Street and Meridian Avenue N
- Signalization of the intersections along N-NE 185th Street at 5th avenue NE and 7th Avenue NE may be necessary depending on actual station and parking garage-access volumes with implementation of light rail service in 2023
- As traffic volumes approach the capacity of N-NE 185th Street, evaluate adding lane capacity from Aurora Avenue N to 7th Avenue NE.
- The City intends to develop a corridor plan for 185th Street/10th Avenue NE/NE 180th Street that includes multi-modal transportation facilities necessary to support projected growth in the subarea, a phasing plan for implementation, and a funding plan for improvements.

Left: Existing 195th pedestrian bridge; proposed to be improved with the light rail station project; RIght: Bike sharrow

PEDESTRIAN AND BICYCLE FACILITIES

Additional traffic along N-NE 185th Street along with increased bus service will create a higher potential for conflicts between bicyclists, pedestrians, transit vehicles and automobiles. One possible measure to properly accommodate all modes could be a cycle track from the Interurban Trail to 10th Avenue NE. A facility of this nature would allow for a safe non-motorized connection via the key N-NE 185th Street corridor while separating bicycles from vehicles and pedestrians. As mentioned previously, the City intends to develop a corridor plan for 185th Street/10th Avenue NE/NE 180th Street that includes multi-modal transportation facilities. The corridor plan will examine this potential option more closely including the potential need to expand Right-of-Way.

With redevelopment, the City intends to improve overall pedestrian and bicycle connectivity by allowing for more dedicated pathways with parcel consolidation and expanded development. Any new development in the area under the proposed zoning should consider pedestrian and bicycle paths through the sites to allow for connections to the station and subarea amenities without the need to travel along busy arterials. A dedicated path along the I-5 right-of-way near the proposed light rail alignment could provide a connection between the station and the pedestrian and bicycle bridge at NE 195th Street and would provide a connection to the regional trails such as the Interurban Trail and the Burke-Gilman Trail. Additionally, bicyclists from Lake Forest Park and areas to the northeast and east of the subarea may utilize Perkins Way as an access route to the station. This is a coordination action that the City, Sound Transit, and the Washington State Department of Transportation should explore in the near term to assess feasibility.

While the City is currently upgrading Perkins Way with bicycle signage as part of the Interurban and Burke-Gilman Connector project, a more separated facility to accommodate bikes may be needed. Conversely, traffic volumes from new development along 10th Avenue NE may necessitate the installation of bicycle lanes to provide a safer bicycling environment. Another possibility for future consideration could be a trail along the utility corridor on 8th Avenue NE.

The City is interested in exploring opportunities for bicycle sharing and bicycle storage facilities near the station to encourage and enhance bike access to transit. This likely would encourage more use of the N-NE 185th Street/10th Avenue NE/NE 180th Street corridor as a bicycle connection to and from the station.

Seattle Bike Share

TRAFFIC CALMING

The City will engage as needed in traffic calming measures along non-arterial streets to prevent cut-through traffic both to the light rail station and the new development sites. The City of Shoreline has a Neighborhood Traffic Safety Program to help address the safety concerns on residential streets stemming from higher speed and/or cut-through traffic. This program includes enhanced enforcement and education, along with engineering solutions such as traffic circles, speed humps, and narrowed lanes. Solutions to address traffic issues are discussed and implemented as part of a public process to ensure they appropriately address a given circumstance.

TRANSIT SERVICE AND BIKE AND CAR SHARING

At least 22 buses are expected to serve the future light rail station during the PM peak hour, or roughly one bus every three minutes. Depending on final design of the station, ample bus pull-out and layover space should be provided to maintain operations efficiency and prevent spillover impacts to the roadway network.

Transit service integration and improvements will be an important priority after the light rail station is operating. As part of the Transit Service Integration Plan (TSIP), anticipated for adoption in 2016, the City should specifically focus on the N-NE 185th Street/10th Avenue/180th Street corridor to ensure transit vehicles can operate efficiently through the subarea. Strategies the City may employ include the construction of signal priority systems, queue jumps, and bus bulbs. Specifically, these solutions should target potential chokepoints along N-NE 185th Street, such as Meridian Avenue N and/or 5th Avenue NE. Additionally the plan should evaluate the potential signalization of NE 185th Street and 7th Avenue NE to allow for efficient access of busses into and out of the light rail station.

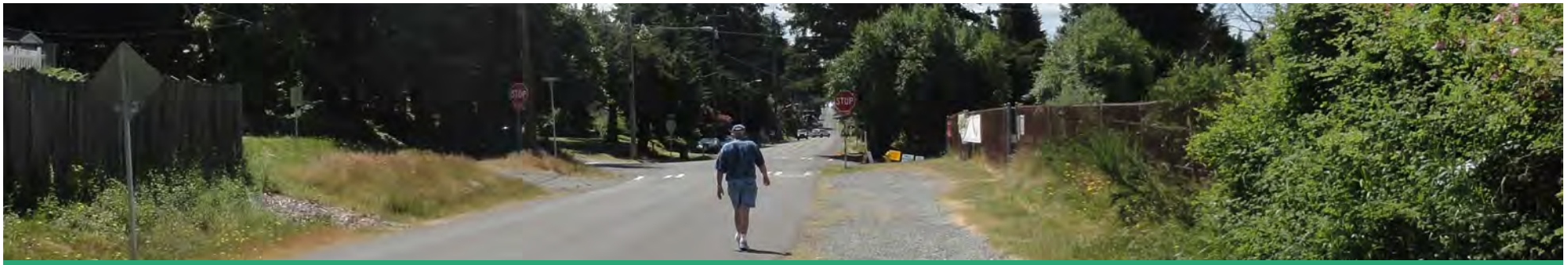
The City of Shoreline should continue coordinating with area transit agencies in the development of a TSIP for the light rail station subarea. This coordination should coincide with traffic analysis to ensure transit service reliability along the major corridors in the area.

Additionally, on-demand transport such as the King County Metro Access and the Hyde Shuttles should have direct service to the light rail station bus access point in order to improve service for those with mobility limitations.

Additional modes that could operate in coordination with transit include bike sharing or car sharing programs, with organizations such as Zipcar, Car2Go or Puget Sound Bike Share (“Pronto”). An analysis of potential demand for these services should be conducted to determine their relative feasibility.

PARKING MANAGEMENT STRATEGIES

Monitoring and managing parking issues in the subarea should be an important focus of the first twenty years of implementation of any action alternative. As demand for parking shifts with the light rail service and changes in development, the City has a number of parking management strategies that are common elements in Transit-Oriented Development.



Existing view of the 10th Avenue NE corridor

- RESIDENTIAL PARKING ZONES (RPZ) – Implementation of an RPZ would help discourage long-term parking within residential areas by retail or light rail station users.
- TIME LIMITS AND RESTRICTIONS – Time limits can help reduce parking spillover into residential areas and can also improve parking turnover in commercial areas.
- PARKING LOCATION SIGNAGE – Information directing drivers to available off-street parking locations can improve vehicle circulation and ensure that parking supply is utilized.
- VARIABLE PARKING PRICING – Changes in parking rates based on time period and demand can help moderate available supply.
- ADDITIONAL OFF-STREET PARKING SUPPLY – If existing parking facilities are being efficiently used, then the City or property owners may consider adding off-street parking to ease the pressure off of on-street supply.

While any new development is required by City code to provide ample off-street parking for the demand generated by its respective use, there are options to reduce the overall amount of parking supply created. City code stipulates that development may reduce its parking supply requirement by up to 25 percent by using a combination of the following criteria:

- Shared parking agreement with adjoining parcels and land uses that do not have conflicting parking demands
- High-occupancy vehicle (HOV) and hybrid or electric vehicle (EV) parking
- Conduit for future electric vehicle charging spaces, per National Electrical Code, equivalent to the number of required disabled parking spaces
- High-capacity transit service available within a one-half mile radius
- Concurrence with King County Right Size Parking data, census tract data, and other parking demand analysis results

ESTIMATED COSTS FOR TRANSPORTATION SYSTEM IMPROVEMENTS AND TRANSPORTATION ACTIONS

Table 7-3 on the following page displays estimated costs for recommended transportation actions and improvements in this plan.

Street	Description	Low	High	Notes
N/NE 185th Street	Travel demand management strategies to reduce overall vehicle trips along the corridor. This includes continued expansion of the bicycle and pedestrian network along with transit service priority measures	$3,000,000	$4,100,000	Cycle track from Aurora to 10th Avenue at $210 / LF. Signal priority/signal upgrades at 4 intersections (5th/Meridian/1st/7th). Sidewalk widening from Meridian to 10th Avenue at $315 / LF.
N/NE 185th Street	Continue to monitor traffic volumes on a bi-annual basis to identify changes in congestion patterns	-	-	Current function is assumed in the City budget
N/NE 185th Street	Employ access management strategies for new development to reduce the number of curb cuts and access points along N/NE 185th Street	-	-	Based on policy and development strategies, no costs assumed
N/NE 185th Street	Expand signal coordination and other Intelligent Transportation Systems (ITS) strategies.	$800,000	$1,320,000	3 signal upgrades and ITS coordination
N/NE 185th Street	Consistent with the TMP, reconfigure the intersection of N 185th Street and Meridian Avenue N	$1,300,000	$1,700,000	500 foot northbound/southbound approach lanes. 50 foot eastbound right-turn storage bay. Contingency for ROW included
N/NE 185th Street	Provide protected/permitted phasing for northbound and southbound left-turn movements at N 185th Street and Meridian Avenue N	-	-	Timing adjustments are assumed under current City budget
N/NE 185th Street	Signalization of the intersections along N/NE 185th Street at 5th avenue NE and 7th Avenue NE may be necessary depending on actual station and parking garage-access volumes with implementation of light rail service in 2023	$500,000	$1,000,000	$250,000-$500,000 per signal assumed
N/NE 185th Street	Develop a corridor plan for 185th Street/10th Avenue NE/NE 180th Street that includes multi-modal transportation facilities necessary to support projected growth in the subarea, a phasing plan for implementation and a funding plan for improvements.	$400,000	$500,000	The corridor plan is a precursor to any capacity expansion or other improvements.
N/NE 175th Street	Consistent with the TMP, reconfigure the intersection of N 175th Street and Meridian Avenue N	$600,000	$800,000	Based on the addition of a 500 foot northbound approach lane. Contingency for ROW included

FIGURE 7-3: Transportation System Improvements to Support the Planned Action through 2035

Street	Description	Low	High	Notes
N/NE 175th Street	NE 175th Street and the I-5 Ramps are within WSDOT jurisdiction and may require additional mitigation	-	-	This is assumed to be state funded
1st Avenue NE	Consistent with the TMP, add bicycle lanes along 1st Avenue NE from the 195th Street trail to NE 185th Street	$200,000	$300,000	Estimates based on costs in the TMP
5th Avenue NE	Consistent with the TMP, reconstruct 5th/7th Avenue NE with full sidewalk coverage and bicycle lane provision from NE 175th Street NE to NE 185th Street and 5th Avenue NE from NE 185th Street to NE 195th Street.	$5,900,000	$7,900,000	Estimates based on costs in the TMP
Meridian Avenue N	Continue to monitor traffic volumes on a bi-annual basis to identify changes in congestion patterns	-	-	Current function is assumed in the City budget
Meridian Avenue N	Consistent with the TMP, convert Meridian Avenue N to a three-lane profile with a two-way left-turn lane and bicycle lanes	$500,000	$1,200,000	Cost range dependent on level of infrastructure in place
10th Avenue NE	Consistent with the TMP, install sidewalks on both sides of the street from NE 175th Street to NE 195th Street	$2,400,000	$3,200,000	Estimates based on costs in the TMP
NE 180th Street	Consistent with the TMP, install sidewalks on both sides of the street from 15th Avenue NE to 10th Avenue NE	$600,000	$800,000	Estimates based on costs in the TMP
Perkins Way	While future traffic volumes for Perkins Way are forecast to be within the capacity of the roadway, the City should continue to evaluate bicycle facilities to improve connections from northeast of the station.	$600,000	$800,000	While specific treatment is not known, conservative costs were assumed at $210 / LF
Potential I-5 Non-Motorized Trail	Work with Sound Transit to identify potential locations for a non-motorized trail along the right-of-way secured for the light rail alignment on the east side of I-5. This trail would provide a dedicated north-south connection from the NE 195th Street pedestrian and bicycle bridge to the station.	$875,000	$1,250,000	Costs based on $360 / LF value utilized in the 195th Street Trail construction with additional contingency due to ROW needs

FIGURE 7-3: Transportation System Improvements to Support the Planned Action through 2035, Continued

Utility improvements are needed in certain Shoreline neighborhoods to serve projected growth and redevelopment in the subarea.

Utility System Improvement Needs

Utilities analyzed in the planning process include:

- Water systems and facilities managed by the North City Water District and Seattle Public Utilities
- Wastewater system and facilities managed by Ronald Wastewater District (anticipated to be assumed by the City in 2017 as per interlocal agreement)
- Surface water management systems managed by the City of Shoreline
- Electricity services provided by Seattle City Light
- Natural gas services provided by Puget Sound Energy
- Telephone, cable, and communications services provided by Comcast, Frontier Communications, CenturyLink, Integra Telecom, and Zayo Group (formerly AboveNet Communications)

For the electricity, natural gas, telephone, cable, and communications services, incremental growth and redevelopment would be able to be served through typical extensions of lines and services supported by customer fees and charges with each connection/service. For this reason, no specific capital improvements have been identified as being needed for these utilities. Refer to later discussion regarding recommended action for the electricity transmission lines that extend through the subarea.

For water, wastewater, and surface water, upgrades and expansions to systems and facilities will be needed to serve growth through 2035. Much of this analysis is based on anticipation of full build-out utility service in the subarea and anticipation that utility providers may upsize pipes and facilities for a longer period of growth than through 2035 to avoid too many incremental upgrade costs in coming decades. That said, utility improvements are customarily funded and implemented on an incremental basis to serve ongoing population growth, and this will be a continual process as more redevelopment occurs over time.

Each utility provider will need to update their systems master plans to reflect the adopted zoning and potential growth in customers and redevelopment. As part of updating their plans, they will confirm specific incremental improvement needs and plan for these through their normal procedures. This process may amend some of the planning-level descriptions of improvement projects and related costs described in this section of the plan.

WATER SYSTEM AND FACILITIES MANAGED BY NORTH CITY WATER DISTRICT

Recommended improvements are based on the assumption that the subarea will eventually be built-out with land uses allowed under the proposed zoning for the preferred alternative. For the purposes of this plan, it is assumed that infrastructure upsizing to serve the twenty-year 2.5 percent growth rate may include a higher level of improvements. In some cases, upsizing may be done to accommodate the build-out conditions since the utility provider likely would not continuously upsize mains as the population continues to grow, but would upsize for the projected population. With further planning and analysis, the utility provider would determine the most cost effective and efficient method for making improvements to serve growth in the interim years up to the built-out condition.

The total length of new pipe potentially necessary to accommodate the projected population in 2035 is approximately 8,600 feet. Estimated improvements needed to serve the next twenty years of growth (but assuming full upsizing to serve build-out) include the following.

1. The following pipes may need to be upsized to 12" diameter pipes to accommodate the projected population in 2035. 12" diameter or larger pipes may be necessary under total build-out.
    A. 2,130 feet along 5th Avenue NE from N 185th Street to NE 195th Street
    B. 1,330 feet along NE 193rd Street from 1st Avenue NE to 5th Avenue NE
    C. 1,100 feet along NE 192nd Street from 3rd Avenue NE to 5th Avenue NE
    D. 670 feet along NE 189th Street from 8th Avenue NE to 10th Avenue NE
    E. 670 feet along NE 188th Street from 8th Avenue NE to 10th Avenue NE
    F. 1,780 feet along NE 185th Street from 8th Avenue NE, and south along 5th Avenue NE, to NE 180th Street
    G. 920 feet along 7th Avenue NE from NE 183rd Street to NE 180th Street
    H. 210 feet along NE 183rd Street from 7th Avenue NE to 8th Avenue NE
    I. 1,700 feet along NE 180th Street, from 5th Avenue NE to 10th Avenue NE

WATER SYSTEM AND FACILITIES MANAGED BY SEATTLE PUBLIC UTILITIES

As with recommended improvements for the North City Water District, this analysis assumes upsizing would occur to accommodate the twenty-year estimated annual 2.5 percent growth rate. The distribution system and facilities could be potentially upsized as necessary to accommodate the planned action at build-out conditions. Because it is not likely that the utility provider would continuously upsize their mains as the population continues to grow, but would upsize at some point for the projected population. With further planning and analysis, each utility provider would further determine how improvements could be made more cost effectively in the interim years before build-out.

Water improvements in the Seattle Public Utilities system anticipated to serve the projected population in 2035 under any of the action alternatives (but typically inclusive of upsizing to serve full build-out) are described below.

The total length of pipe potentially necessary to accommodate the projected population in 2035 is approximately 4,500 feet. Anticipated improvements include the following:

1. An analysis based solely on projected population growth and per capita demand projections, estimates the following pipe diameters may need to be upsized to 8" diameter pipes to accommodate the projected population in 2035. Under total build-out of the planned action, these pipe diameters may need to be upsized to 12" diameter pipes.
    A. 890 feet along Sunnyside Avenue N from the north end to N 180th Street
    B. 240 feet along N 186th Street from east end to Corliss Avenue N
2. The following pipes may need to be upsized to 8" diameter pipes to accommodate the projected population in 2035. 8" diameter or larger pipes may be necessary under total build-out of the planned action.

A. 180 feet along N 185th Court to the intersection with Midvale Avenue N

B. 170 feet along N 187th Street from west end to 1st Avenue NE

3. The following pipes likely would need to be upsized to 12" diameter pipes to accommodate the projected population in 2035 (12" diameter or larger pipes may be necessary to serve build-out of the planned action).

   A. 1,160 feet along 3rd Avenue NE from N 185th Street to NE 180th Street to connect the pipe network into a loop

   B. 650 feet along Ashworth Avenue N, from N 185th Street to N 183rd Street

   C. 650 feet along 1st Avenue NE from N 187th Street to N 185th Street

   D. 560 feet along NE 180th Street from 3rd Avenue NE to 1st Avenue NE

   E. 170 feet along 3rd Avenue NE from north end to NE 185th Street

WASTEWATER SYSTEM AND FACILITIES MANAGED BY THE RONALD WASTEWATER DISTRICT

The total length of new wastewater pipe/improvements potentially necessary to accommodate the projected population in 2035 is approximately 10,100 feet. Anticipated improvements include the following:

1. An analysis based solely on projected population growth and per capita demand projections, estimates the following pipe diameters may need to be upsized to 12" diameter pipes to accommodate the projected population in 2035. Under total build-out of the planned action, these pipe diameters may need to be upsized to 18" diameter pipes:

   B. 1,300 feet of pipe along N 185th Street, from Meridian Avenue N to 1st Avenue NE. 1,900 feet of pipe along 1st Avenue NE, from N 188th Street to N 180th Street.

   C. 2,000 feet of pipe along 3rd Avenue NE, from NE 185th Street to NE 180th Street, and NE 180th Street, from 3rd Avenue NE to 1st Avenue NE.

   D. 1,500 feet of pipe along 8th Avenue NE from 188th Street to NE 185th Street and along NE 185th Street from 8th Avenue NE to Lift Station #15 on 12th Avenue NE

2. The following pipes may need to be upsized to 18" diameter pipes to accommodate the projected population in 2035. 18" diameter or larger pipes may be necessary under total build-out of the planned action:

   A. 2,700 feet of pipe along 5th Avenue NE

3. The following pipes may need to be upsized to 12" diameter pipes to accommodate the projected population in 2035. 12" diameter or larger pipes may be necessary under total build-out of the planned action:

   A. 650 feet of pipe along 8th Avenue NE, from NE 190th Street to NE 188th Street

4. Lift Station #15 may need to be upsized to accommodate estimated demand for the projected population in 2035. The 2035 population is projected to increase demand to this lift station to approximately 904 gpm. Under total build-out of the planned action, the projected demand flow would increase would be 4,450 gpm.

SURFACE WATER MANAGEMENT SYSTEM AND FACILITIES MANAGED BY THE CITY OF SHORELINE

The total length of surface water pipe improvements potentially necessary to accommodate the projected population in 2035 is approximately 27,300 feet. Anticipated improvements include the following:

1. An analysis based solely on projected population growth and per capita demand projections, estimates the following pipe diameters may need to be upsized to 18" diameter pipes to accommodate the projected population in 2035. Under total build-out of the planned action, these pipe diameters may need to be upsized to 24" diameter pipes:
    A. 570 feet along N 185th Street, from Stone Avenue to Ashworth Avenue
    B. 1,080 feet along N 185th Street, from Densmore Avenue to Burke Avenue
    C. 970 feet along Wallingford Avenue, from N 185th Street to N 188th Street
2. The following pipes may need to be upsized to 18" diameter pipes to accommodate the projected population in 2035. 18" diameter or larger pipes may be necessary under total build-out of the planned action:
    A. 450 feet along N 185th Street, from Densmore Avenue to Wallingford Avenue
    B. 600 feet along Densmore Avenue, from N 185th Street to N 188th Street
    C. 930 feet along Burke Avenue, from N 185th Street to N 188th Street
    D. 500 feet along N 185th Street, from Meridian Avenue to Corliss Avenue
    E. 240 feet along Corliss Avenue, from N 184th Street to N 185th Street
    F. 920 feet along Bagley Place N, from N 187th Street to N 185th Street
    G. 620 feet along N 180th Street, from 1st Avenue NE to Cromwell Park
    H. 1,530 feet along 3rd Avenue NE, from the north end to NE 180th Street, continue along NE 180th Street to 1st Avenue NE
    I. 820 feet along 2nd Avenue NE, from the north end to NE 180th Street
    J. 890 feet along N 185th Street, from Sunnyside Avenue to 3rd Avenue NE
    K. 350 feet along 2nd Avenue NE, from the south end to N 185th Street
    L. 350 feet along 3rd Avenue NE, from the south end to N 185th Street
    M. 3,900 feet along 5th Avenue NE, from N 185th Street to NE 195th Street
    N. 570 feet along N 185th Street, from 3rd Avenue NE to 5th Avenue NE
    O. 680 feet along NE 190th Street, from 8th Avenue NE to 10th Avenue NE
    P. 1,320 feet along 10th Avenue NE, from NE 190th Street to NE 185th Street
    Q. 650 feet along NE 185th Street, from 10th Avenue NE to 8th Avenue NE, and south along 8th Avenue NE to NE 183rd Street
    R. 250 feet along 9th Avenue NE, from the south end to NE 185th Street
    S. 250 feet along 10th Avenue NE, from the south end to NE 185th Street
    T. 1,480 feet along NE 180th Street, from 15th Avenue NE to 10th Avenue NE
    U. 270 feet along 14th Avenue NE, from the north end to NE 180th Street

Existing conditions along 8th Avenue NE

3. The following new 12" diameter pipe runs may need to be installed to accommodate the projected population in 2035. 12" diameter or larger pipes may be necessary under total build-out of the planned action:
    A. 400 feet along N 184th Street, from the east end to Corliss Avenue
    B. 1,310 feet along 8th Avenue NE, from NE 190th Street to NE 188th Street, and east along NE 188th street to 10th Avenue NE
    C. 670 feet along NE 189th Street, from 8th Avenue NE to 10th Avenue NE
    D. 310 feet along NE 182nd Street, from 10th Avenue NE to 11th Avenue NE
    E. 1,200 feet along 7th Avenue NE, from the north end to NE 180th Street
    F. 370 feet along 5th Avenue NE, from NE 185th Street to the connection with the existing pipe
4. The following new 12" diameter pipe runs may need to be installed to accommodate the projected population in 2035. 18" diameter or larger pipes may be necessary under total build-out of the planned action:
    A. 720 feet along 8th Avenue NE, from the south end to NE 185th Street
    B. 800 feet along 9th Avenue NE, from the south end to NE 185th Street
    C. 800 feet along 10th Avenue NE, from the south end to NE 185th Street
    D. 550 feet along 6th Avenue NE, from the north end to NE 180th Street
5. Pump Station MC03 along NE 185th Street likely would need to be upsized to accommodate estimated demand for the projected population in 2035.

Figures 7-4 through **7-6** illustrate already planned utility improvements, as well as newly proposed improvements to support the next twenty years of redevelopment under the planned action. **Table 7-3** lists the estimated costs of utility improvements to support redevelopment. As noted previously, utility assumptions are based on a preliminary, planning-level of analysis and assume that some lines would be installed with capacities to support full build-out of the subarea, beyond the next twenty years. All of the information in this plan pertaining to utilities will need to be confirmed through updated systems planning by the City, North City Water District, Seattle Public Utilities, and Ronald Wastewater.

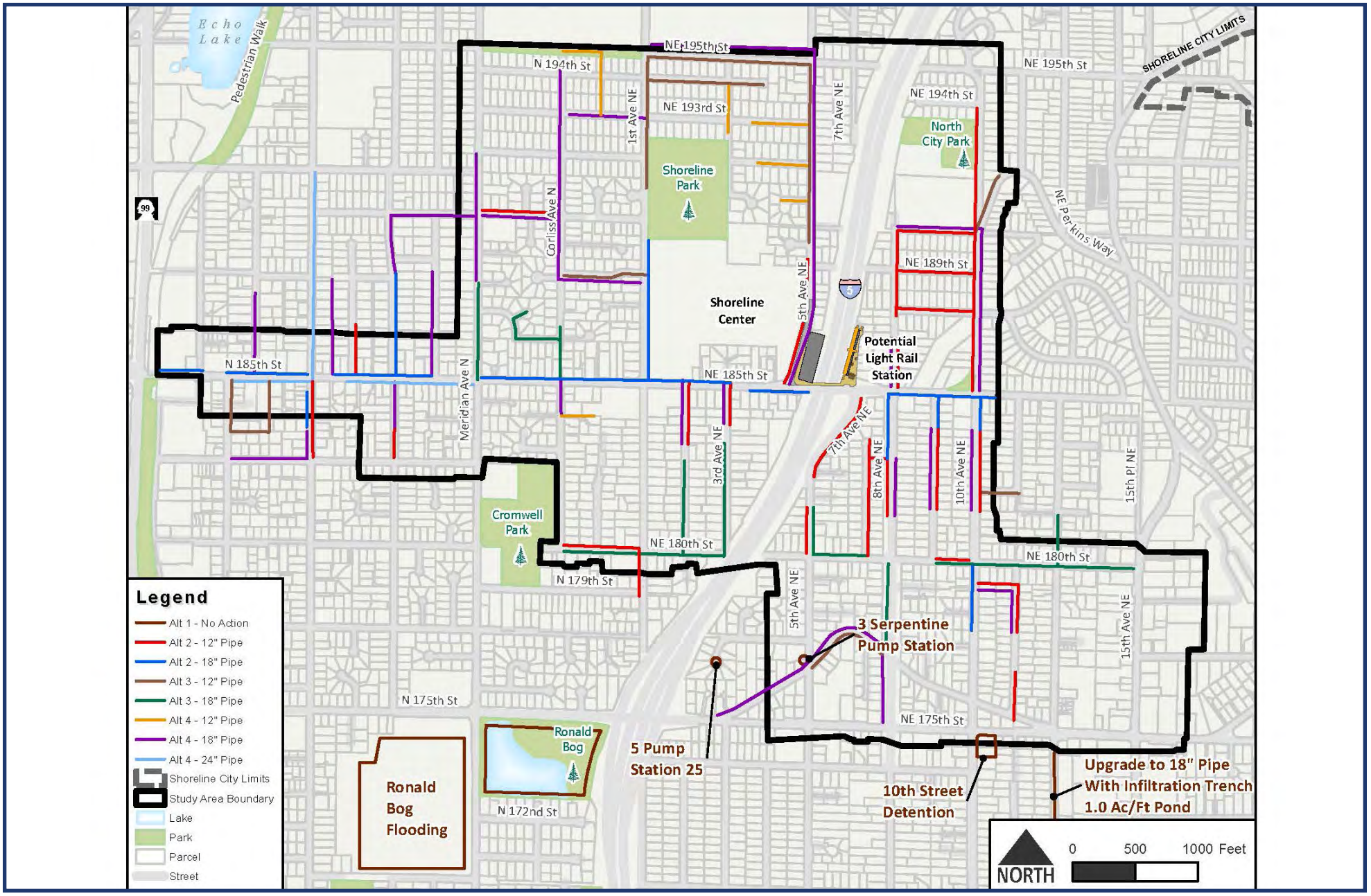


FIGURE 7-4: Planned and Recommended Water Improvements

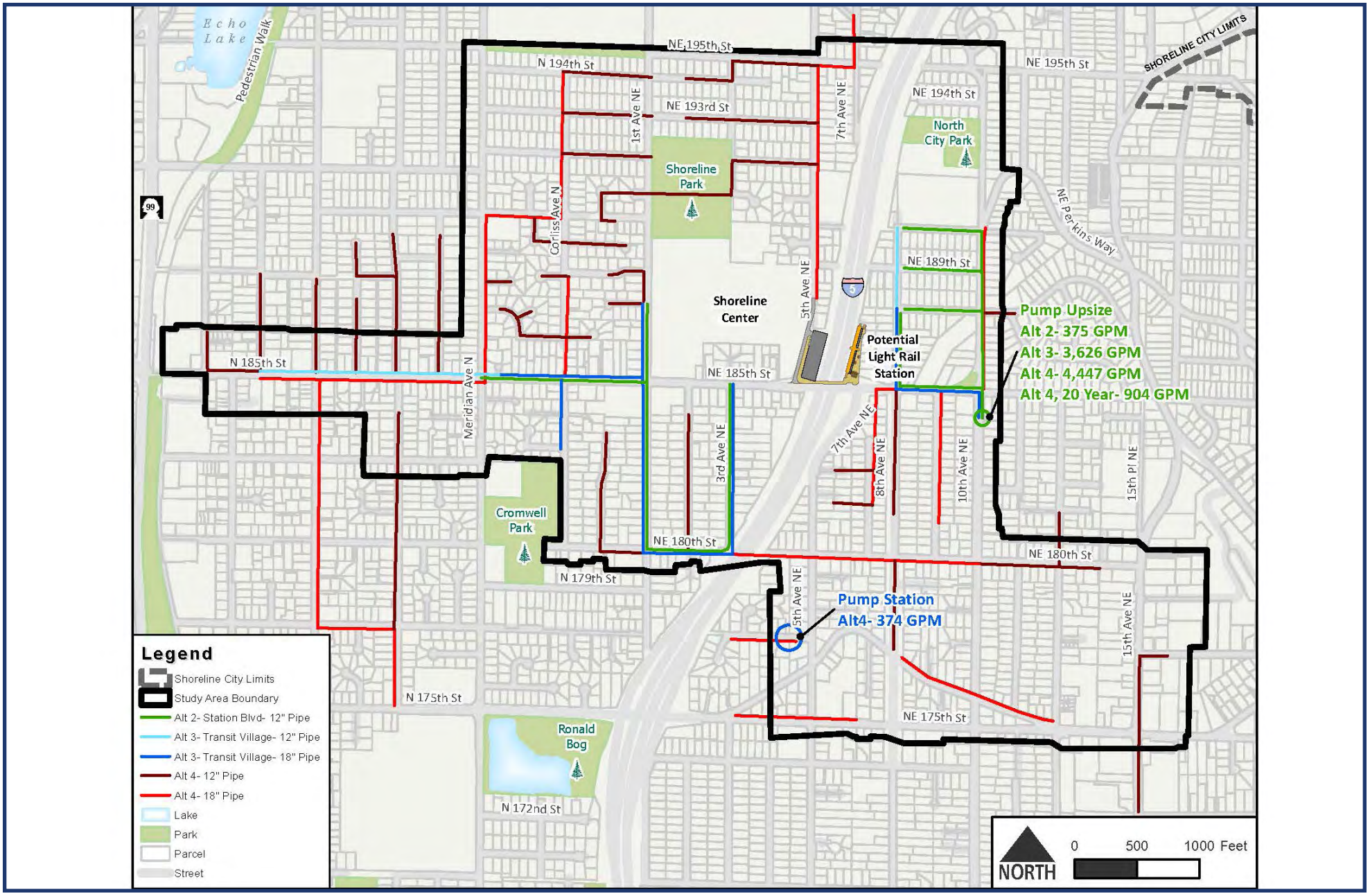


FIGURE 7-5: Planned and Recommended Wastewater Improvements

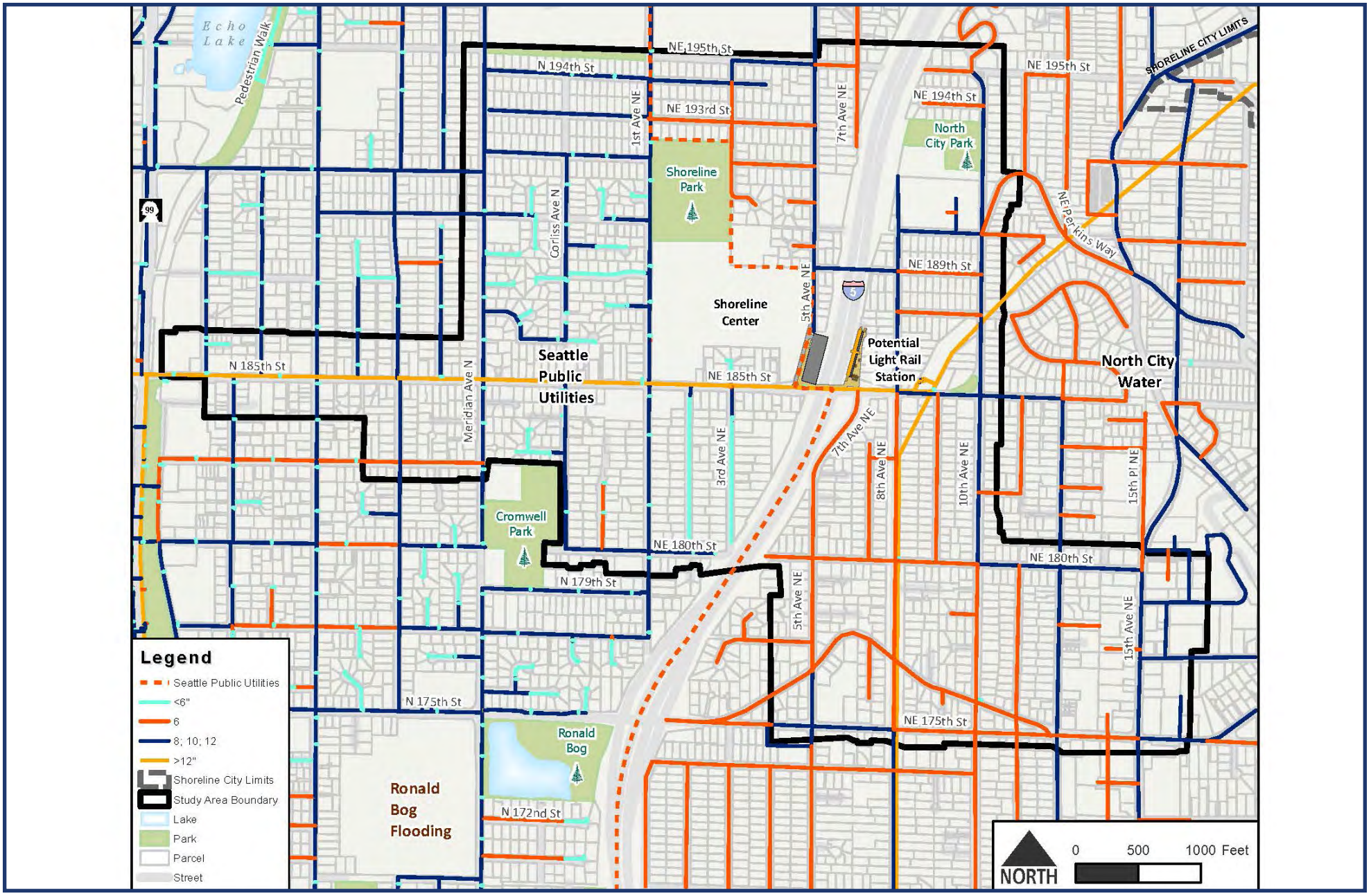


FIGURE 7-6: Planned and Recommended Surface Water Improvements

Raintree sculpture and Interpretive Panel at Cromwell Park

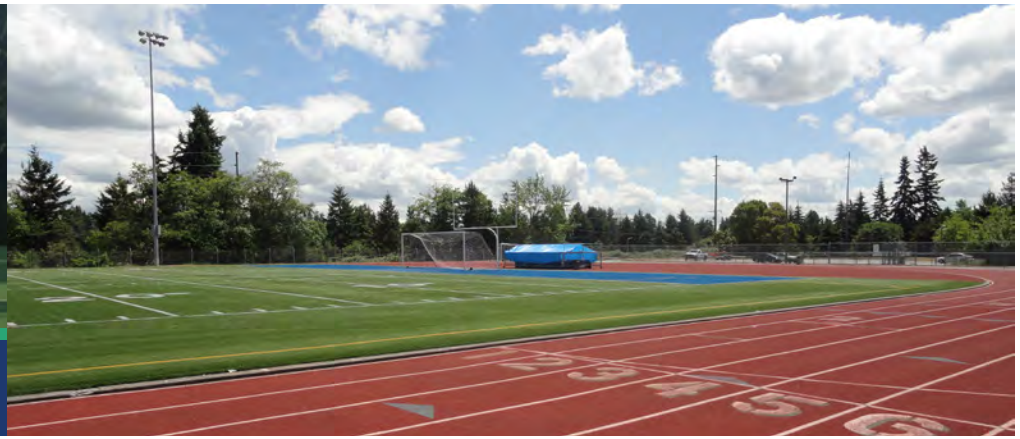
Table 7-3: Utilities—Estimated Capital Improvement Costs

WATER SERVICE—ESTIMATED CAPITAL IMPROVEMENT COSTS					
North City Water District Water Service					
	12"				
2,130	$320	$681,600			
1,330	$320	$425,600			
1,100	$320	$352,000			
670	$320	$214,400			
670	$320	$214,400			
1,780	$320	$569,600			
920	$320	$294,400			
210	$320	$67,200			
1,700	$320	$544,000			
	TOTAL	**$3,363,200**			
Seattle Public Utilities Water Service					
	8"		12"		
890	$260	$231,400	$320	$284,800	
240	$260	$62,400	$320	$76,800	
180	$260	$46,800			
170	$260	$44,200			
1,160			$320	$371,200	
650			$320	$208,000	
650			$321	$208,650	
560			$322	$180,320	
170			$323	$54,910	
	TOTAL	**$1,407,880**			

SANITARY SEWER SERVICE—ESTIMATED CAPITAL IMPROVEMENT COSTS					
Ronald Wastewater District—Sanitary Sewer Service					
	12"		18"		
1,300	$500	$650,000	$600	$780,000	
1,900	$500	$950,000	$600	$1,140,000	
2,000	$500	$1,000,000	$600	$1,200,000	
1,500	$500	$750,000	$600	$900,000	
2,700			$600	$1,620,000	
650	$500	$325,000			
	TOTAL	**$5,295,000**			

SURFACE WATER MANAGEMENT SERVICE—ESTIMATED CAPITAL IMPROVEMENT COSTS					
City of Shoreline—Surface Water (Stormwater) Management Service					
	12"		18"		24"
570	$150		$170	$96,900	$210
1,080			$170	$183,600	$210
970			$170	$164,900	$210
450			$170	$76,500	
600			$170	$102,000	
930			$170	$158,100	
500			$170	$85,000	
240			$170	$40,800	
920			$170	$156,400	
620			$170	$105,400	
1,530			$170	$260,100	
820			$170	$139,400	
890			$170	$151,300	
350			$170	$59,500	

Surface Water (Stormwater) Management Service, Continued					
	12"		18"		24"
350			$170	$59,500	
3,900			$170	$663,000	
570			$170	$96,900	
680			$170	$115,600	
1,320			$170	$224,400	
650			$170	$110,500	
250			$170	$42,500	
250			$170	$42,500	
1,480			$170	$251,600	
270			$170	$45,900	
400	$150	$60,000			
1,310	$150	$196,500			
670	$150	$100,500			
310	$150	$46,500			
1,200	$150	$180,000			
370	$150	$55,500			
720	$150	$108,000	$170	$122,400	
800	$150	$120,000	$170	$136,000	
800	$150	$120,000	$170	$136,000	
550	$150	$82,500	$170	$93,500	
	TOTAL	**$4,501,800**			



From Left: Soccer Field and Athletic Stadium at Shoreline Center

Parks, Recreation, Open Space, and Other Areas of the Public Realm

PARKS, RECREATION, AND OPEN SPACE

When considering the specific type of facilities the increased population will need, it is important to consider a number of factors, including community involvement, availability of the different classifications of parks and open space, and level of service standards. Community involvement during the subarea planning process has confirmed that residents are interested in ensuring that neighborhood parks and other facilities (playgrounds, public gathering spaces, teen centers, etc.) are available to serve new residents as they move to the area in the future. They are also interested in public art, enhanced streetscapes, and other amenities.

While there appear to be adequate regional and community parks in Shoreline to serve future growth, neighborhood parks will be needed in the subarea as the population increases.

Based on traditional National Park and Recreation Association (NPRA) standards, it is advisable to have a neighborhood park serving a half-mile area with population of up to 5,000 people. However, it should be noted that these standards are used with discretion in determining park needs, because every community is different and they may have various types of recreation facilities that meet the demand even if they do not have the acreage.

Neighborhood parks can vary in size, from one acre to up to fifteen acres. Most existing neighborhood parks in the City of Shoreline are between one acre and five acres in size.

With the projected population of 2,916 to 5,399 new residents (in 1,140 to 2,190 households) by 2035, over the current level of 7,944 residents and 3,310 households in the subarea, there will be a growing demand for neighborhood parks. There also would be an estimated 502 to 928 new employees by 2035.

This level of population would equate to demand for approximately one new neighborhood park in place by the end of the twenty-year horizon of 2035, if not before. Also in some cases, existing neighborhood parks may need new facilities such as play equipment or other elements to improve their recreation capacity for use by the surrounding residents.

Implementation of urban plazas, pocket parks, playgrounds, trail corridors, and other open space as part of redevelopment projects could certainly also serve some of the demand for neighborhood park space.

Given the lack of available land and limited resources of the City to purchase land for development of new parks, dispersed mini-parks and urban plazas/public gathering spaces, which are smaller (one-half acre or less), could help to serve the demand in the subarea if incorporated into redevelopment projects. Larger development projects should be required to provide some level of park and open space use for residents, and the City should continually evaluate the best possible locations for creating new neighborhood parks as the subarea grows.

The City intends to continue to monitor the need for parks as the neighborhood grows and to seek funding for, acquire property, and develop new neighborhood park facilities in the subarea to serve the growing population's needs. One of the important objectives of developing a subarea plan is to identify these key areas of need, so that the City and its partners can begin to proactively plan to serve these in the near term. Recognizing that property values likely would increase in the subarea in the future, it would be advantageous to seek property for parks and open space use and work with the Parks Board to determine a strategy for park dedication and/or impact fee in the near term.

DEMAND FOR OTHER HUMAN SERVICES/ CULTURAL AND COMMUNITY SUPPORT FACILITIES

Under the planned action, the growing population of the subarea also will generate demand for a wide range of other human services and community support facilities, such as senior center facilities, community meeting and classroom facilities, recreation center facilities, etc. As discussed previously the Shoreline Center currently provides a wide range of these types of services and facilities to the community. The City of Shoreline and the Shoreline School District recognize how important the facilities at the Shoreline Center are to the community. As such, if the site were to redevelop in the future, one of the likely options would look at how to retain these facilities and services while also maximizing the use of the site for housing and mixed use.

Preschool Playground

ESTIMATED CAPITAL COSTS

Implementation of new parks, recreation, and cultural facilities (approximately one new neighborhood park and other amenities) to serve the next twenty years of growth in the subarea will have an estimated capital improvement cost of approximately $2,500,000 to $3,000,000 depending on property acquisition costs, redevelopment contributions, and the potential for grant funding. This assumes acquisition and development of one neighborhood park and other minimal facilities in the subarea (public art, etc.) This does not include costs associated with redevelopment of the City Pool and Spartan Recreation Center, a project the City intends to explore in the coming years. This capital cost estimate also does not include long term operating and maintenance costs associated with new facilities.

RECOMMENDATIONS FOR ACTIONS AND IMPROVEMENTS

A number of park-related projects are currently in the PROS Plan recommendations list and the City's Capital Improvements Plan. The PROS Plan has short-term, mid-term, and long-term recommendations along with community goals during the current planning period. In the future, these recommendations will be reviewed annually and appropriately considered during budgeting of the Capital Improvement Plan. In proximity to the subarea, the current plan recommendations include property acquisition at Echo Lake and master planning and phase 1 implementation of the Shoreline Center. As stated above, it will be important to consider how neighborhood park facilities may be integrated with redevelopment of the Shoreline Center and adjacent City of Shoreline property.

The PROS Plan likely will receive updates in 2017, 2023, and 2029. At those times, the City will reassess the demands and needs and may modify recommendations based on budgeting, available funding, or environmental changes. With those updates, the City should carefully evaluate the level of recent and pending change in the station subarea and make recommendations for additional park, recreation, and open space facilities accordingly.

The City intends to move forward with the following specific actions, with the first three proposed to be adopted in the Planned Action Ordinance, the fourth as part of development regulations. The other items listed will be explored as redevelopment occurs and as part of development agreements.

- Investigate potential funding and master planning efforts to reconfigure and consolidate existing City facilities at or adjacent to the Shoreline Center. Analyze potential sites and community needs, and opportunities to enhance existing partnerships, for a new aquatic and community center facility to combine the Shoreline Pool and Spartan Recreation Center services.
- Considering potential acquisition of sites that are ill-suited for redevelopment due to high water table or other site specific challenges for new public open space or stormwater function.
- Explore a park impact fee or fee in-lieu of dedication program for acquisition and maintenance of new parks or open space and additional improvements to existing parks. Funds from this program would allow the City to purchase property and develop parks, recreation, and open space facilities over time to serve the growing neighborhood.
- Proposed development regulations for the station subarea should be adopted to require and/or encourage the provision of public space and recreation facilities with redevelopment projects, as part of Development Agreements (Chapter 20.30.355) and site design (Chapter 20.50.240). As part of negotiating Development Agreements, the City could ask developers to select from a list of needed facilities. (See list of needed facilities earlier in this section, on pages 3-180 and 3-184.)
- The City will work toward creating a variety of public spaces and recreational opportunities to serve the multi-generational needs of the growing transit-oriented community and capable of connecting to other facilities the subarea and throughout the city.
- As the City develops Capital Improvement Projects in the subarea, funding should be retained for implementation of public park and recreation facilities that could be accommodated within public rights-of-way or utility easements (in cooperation with the utility providers). For example, in a conceptual analysis of the potential redevelopment of 8th Avenue NE completed as part of the subarea planning process, it was determined that sufficient right-of-way exists for development of community gardens, pedestrian/bicycle trails, or other features that would be compatible within the Seattle City Light right-of-way.
- The City would continue to monitor parks, recreation, and open space needs in the subarea and update the PROS plan in the future to address these needs.

Schools and Other Public Services Needs

SCHOOLS

Under the planned action, there would be an increased demand for schools and school facilities over the next twenty years. It is estimated that there potentially would be the following total student populations in the subarea per school level:

- 723 to 893 elementary students
- 223 to 276 middle school students
- 522 to 646 high school students

The Shoreline School District will review these numbers as part of their ongoing planning for school facilities and begin to determine how to address the population growth in the coming years.

In February 2014, two replacement levies were approved to extend financial support for educational programs, maintenance and operations, and technology improvements. These levies would need to be renewed in the future in order for the district to continue to provide a level of service consistent with current conditions. The voting population has been supportive of school district levies, and it is anticipated (but not certain) that as more households with students move into the district, voters would continue to be supportive of future levies.

Recommended actions of the subarea plan to support growth through 2035 include the following.

- The school district will continue to monitor growth levels within its service area, including the station subarea and document trends in student enrollment in order to plan, prepare, and secure resources for the addition of facilities and services to support the growth.
- The school district retains properties for future uses that may be needed. The North City Elementary school site, which is currently not being used as an elementary school, should be retained for future potential school use to serve the growth projected for the subarea. The Shoreline Center also could be redeveloped and with reorganization of site uses, would have space for additional school buildings and facilities.
- For classroom expansion needed on an ongoing basis, the school district owns several portables for siting at impacted schools. If necessary, the school district could purchase or lease more, although this is not a preferred long-term operation scenario.
- The district also has the ability to alter or shift special program assignments to available space to free up space for core programs: gifted programs, special education, arts, activities, and others.
- Boundary adjustments could occur to reallocate the area from which individual schools draw attendance. As completed recently with the high schools, expansion of affected schools, if feasible, without eliminating required playfields or parking, could be a planned improvement to accommodate increases in demand.
- The City of Shoreline does not currently charge impact fees to new development applications for school facilities. The City should coordinate with the Shoreline School District to monitor and determine the potential need for an impact fee program over time. For example, King County charges school impact fees to development projects in unincorporated areas. Impact fees are adopted annually by ordinance following a thorough review by the School Technical Review Committee and the King County Council of the each district's capital facility plan and enrollment projections. Fees vary per school district and are assessed and collected for every new residential dwelling unit. Low-income housing, senior housing, and community residential facilities are exempt from the fee program.

Shoreline Police Neighborhood Center and on bicycles

- Costs associated with new school facilities, staffing and services to serve students of new households in the subarea will be determined by the School District as they update their system planning in the near future.

POLICE, FIRE, AND EMERGENCY SERVICES

The projected 2035 population of new residents would be 2,916 to 5,399 (in 1,140 to 2,190 households), above the current number of residents and households in the subarea. This would create a demand for approximately 2.5 to 4.6 new commissioned police officers by 2035 (over today's levels) to address arising needs such as increased crimes and offenses and to provide added patrol and protection services.

Fire and emergency service providers would need to increase staffing, equipment, and facilities to handle approximately 292 to 675 new calls annually in the subarea by 2035.

- The demand for police protection could be reduced through requirements for security-sensitive design of buildings and Crime Prevention through Environmental Design (CPTED) principles for surrounding site areas.
- Additionally, provisions of onsite security services could reduce the need for police protection, and revenues from increased retail activity and increased property values could help offset some of the additional expenditures for providing additional officers and response to incidents.
- The Fire Department places a lot of emphasis on fire prevention tactics and community education to reduce unintentional injuries and the loss of life and property from fire, accidents, and natural disasters by increasing public awareness.
- Implementation of advanced technology features into future development could increase response time and improve life safety in emergency situations.

- Behavioral changes through education and increased use of outreach, as well as volunteer services such as neighborhood watch programs also could help to reduce demand for some services.
- The increases in households and businesses in the subarea will result in increased tax revenue, which could help to offset some of the additional costs associated with providing increased services and the need for additional facilities related to police, fire, and emergency services.
- With further evaluation and planning, the City could consider the potential for a satellite police station in the subarea over the long term future.
- Costs associated with new police and fire facilities, staffing, and services to accommodate the growing population of the subarea will be determined by the police and fire departments as they update their systems planning in the near future.

SOLID WASTE MANAGEMENT

The population increase in the subarea would increase demand for solid waste, recycling, and food and yard waste collection services over the course of the time the population reaches build-out levels. A planning level estimate of projected solid waste generation is 32,813 to 60,739 total pounds per week total by 2035.

More landfill space may be needed to support waste management at the levels listed. There would need to be intense management of solid waste levels including actions to divert waste to avoid this outcome.

As a contracted public service, the City would need to allocate additional funding to solid waste services to serve the growth in population. It is anticipated that increases in households and businesses in the subarea would result in increased tax revenue, which could help to offset some of the additional costs associated with providing increased solid waste services. Beginning on January 1, 2015, the City will require development projects to submit waste diversion plans and reports, and a salvage assessment for construction and demolition waste, which should also contribute to diversion of a portion of these materials from landfills.

Shoreline Fire Department

Other recommended actions include the following.

- To reduce construction related waste, the City could require development applicants to consider recycling and reuse of building materials when redeveloping sites, or set specific targets for these goals. As of January 1, 2015, the City requires development permit applications to include information about waste diversion.
- The City may condition Planned Action applications to incorporate feasible recycling and reuse measures.
- Using solid waste, recycling, and food and yard waste collection storage and container size requirements would mitigate impacts associated with all of the alternatives.
- Currently the City of Shoreline hosts two recycling events typically in the fall and the spring. These events provide a place for homeowners to recycle materials commonly not collected at the curb. With population growth, increasing the number of events per year could mitigate additional demand on the recycling collection vendor.

Shoreline City Hall

- The City or other entities involved in solid waste management could increase outreach to educate residents and businesses about the importance of waste reduction and recycling. Programs to encourage more composting, conversion of waste to energy, reuse, recycle, barter/trade, etc. could be intensified over time. These efforts could lead to behavioral shifts in the subarea that might then help offset some of the increased demand for services.
- Solid waste services are paid through fees. Additional customers would increase the revenue base for solid waste management services. In addition, the City and its contractor could manage the fee structure and potentially increase fees in the future if needed to address the additional demand for services. It is anticipated that this would be a last resort if outreach and education do not result in reduced solid waste levels.
- The City would work with King County and regional waste management entities to monitor the ongoing potential need for additional landfill space.

CITY HALL/SHORELINE CIVIC CENTER/ CITY SERVICES

The Shoreline Civic Center and City Hall are located at 17500 Midvale Avenue N. This new facility is a 67,000 square feet LEED Gold certified building with an expected lifespan of 50-100 years, located in the heart of Shoreline's Town Center. It offered the ability for the City to consolidate services to one location, and will further that goal to better serve the community by welcoming the new police department in the near term.

The City currently includes the Executive, City Clerk, Attorneys, Finance, Administrative Services, Human Resources, Parks and Cultural Services (including Spartan Recreation Center), Public Works, and Planning and Community Development, with a count of 135 full time equivalent (FTE) employees. The current level of service for the City calculates to approximately 2.52 employees per 1,000 residents, which is one of the lowest in the region. If the City assumes additional responsibilities in the future, such as jurisdiction over utility systems, this ratio could change with more employees per 1,000 residents.

Population growth and redevelopment over time would necessitate ongoing needs for new regulations, planning and development review, and capital projects, as well as City Public Works and Parks maintenance personnel, and other employees. Not including potential utility staff, the addition of 3,418 to 6,327 more people to the subarea over the next twenty years would generate demand for:

- 7.35 to 13.61 additional FTE City employees

HISTORICAL MUSEUM/ARTS AND CULTURE

The Shoreline Historical Museum is located just outside the subarea at the intersection of N 185th Street and Linden Avenue N. It is managed and operated by a non-profit organization with a mission dedicated to preserving, recording and interpreting the heritage of the historic Shoreline area and its relationship to the Northwest region.

Various arts and cultural groups are active in the community and provide a variety of community services.

LIBRARIES

The Shoreline Library is a King County District Library located in the subarea at 345 NE 175th Street. It is a 20,000-square-foot facility opened in 1993, replacing the 15,000-square-foot library built in 1975, and offers additional features that the previous facility did not include, such as two meeting rooms and two study rooms.

POSTAL BUILDINGS

A United States Postal Service Office is located in the subarea at 17233 15th Ave. NE. This North City Post Office has full service capabilities for the surrounding community with hours from 8:30–5:30 Monday through Friday, and open from 8:30 to 3:00 on Saturdays. The lobby area is open 24 hours for PO Box access, mail drop off, and other self service features. The demand for postal services has been in general decline in the US for several years due to the reliance of the public on other communication methods such as email services and social media.

HUMAN AND SOCIAL SERVICES

A Washington Department of Public Health Laboratory is located in Shoreline at 1610 NE 150th Street. The location is outside the subarea, but provides diagnostic and analytical services for the assessment and surveillance of infectious, communicable, genetic, and chronic diseases, and environmental health concerns to the surrounding community. Other types of human services provided in Shoreline include services for seniors such as the senior center and associated social service programs and facilities. Social and community services would include the need for community center uses, additional meeting space, and other facilities.

Farmers Market

Recommended Actions

Given the projected population growth for the next twenty years, there would be a 5.3 percent to 9.9 percent increase in demand for City services and other services such as library, museum, arts and culture, postal, and human/social services. This demand will require a variety of additional public services. For all public services, it is anticipated that increases in households and businesses in the subarea would result in increased tax revenue, which could help to offset some of the additional costs associated with providing increased services and facilities to serve the growing population. Also, because growth would happen gradually over many decades, it is anticipated that the demand could be monitored, planned for, and served in a manageable way over time.

- The City will monitor the need for additional services with growth over time and will allocate funding for additional staff and facilities as part of annual budgeting.
- The City may consider increases in development application review fees to cover costs associated with increased redevelopment activities in the subarea.

- The City should continue to provide outreach and communication to other public service entities listed above to make them aware of the potential for growth over time and the gradual increased demand for services that may accompany the growth.
- The City and other human/community services providers should monitor the need for additional human, cultural, and social services and facilities as growth occurs over time and properly plan for and allocate resources toward expanding and enhancing services to address increased demand.

The costs associated with adding staff, services, and facilities over time will be determined by the City as part of its regular fiscal planning and budgeting activities on an ongoing basis. Other service providers also should review the proposed planned action and estimate additional funding and resources needed for staffing, services, and facilities to serve the next twenty years of growth.

In Conclusion

Even before Shoreline was a city, settlement patterns throughout the history of the area have been influenced by innovations in transportation. In the 1880s, the US Government opened the region to homesteading after railroad fever gripped the Northwest. Speculators planned towns in anticipation of the transcontinental railroad route; among these was Richmond Beach, platted in 1890. The arrival of the Great Northern Railroad in Richmond Beach in 1891 spurred the growth of the small town and increased the pace of development in the wooded uplands.

Construction of the Seattle to Everett Interurban trolley line through Shoreline in 1906, and the paving of the North Trunk Road with bricks in 1913, made travel to and from Shoreline easier, increasing suburban growth. During the early twentieth century, Shoreline attracted large developments drawn by its rural yet accessible location, and commercial centers formed around Interurban stops at Ronald (175th Street and Aurora Avenue N) and Richmond Highlands (185th Street and Aurora Avenue N).

Car travel facilitated settlement, which increased considerably by the mid-1920s. Highway 99 was constructed to stretch from Mexico to Canada, offering more convenient access than ever before to America's new auto travelers. As more people took to the road in automobiles, there was less use of the old trolley line. The Interurban made its last run in February of 1939. By the late 1930s and early 1940s, commercial development concentrated along Aurora Avenue, which saw steadily increasing use as part of the region's primary north-south travel route. Traffic on 99 swelled, particularly after the closing of the Interurban.

After it became clear that an additional north-south freeway would be needed to handle the cross-state traffic, Interstate 5 was constructed in the 1960s, with the final segment in Washington state opening on May 14, 1969. With its opening, motorists could travel without stopping from the northern California state line to the Canadian border, and Highway 99 became more of a regional route and alternate travel way to Interstate 5. The Interstate 5 corridor bisected the community that had become known as Shoreline.

Introduction of light rail service in Shoreline is part of this continuing evolution of the transportation/land use nexus, and will influence settlement patterns in a similar manner. People will be attracted to living near light rail because of the convenient access it provides to the University of Washington, downtown Seattle, Sea-Tac airport, and other locations. Over time, hopefully this new option will reduce dependence on automobiles, and therefore regional congestion and pollution.

Beyond these trends, it is difficult to know how future technological innovations in transportation and building design will impact settlement patterns and other aspects of human behavior. The only certainty is change. All that we can do is continue to adjust; to strive to create a better future for generations to come; to protect what is important, including stewardship of natural and cultural resources; and to foster resiliency in our economic, environmental, and social systems. These are the goals of planning for growth around future light rail stations. It will be incumbent on leaders and residents of the city to see this vision to fruition.